The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte DAVID M. HORNE

Appeal No. 2002-1377
Application 09/002,648[1]

ON BRIEF

Before JERRY SMITH, BARRETT, and DIXON, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-3, 5, 6, 8-16, and 19-24. Claims 4, 7, 17, and 18 are objected to.

We affirm.

[1] Application for patent filed January 5, 1998, entitled "Method for Using Encoded Spreading Codes to Achieve High Bit Densities in a Direct-Sequence Spread Spectrum Communication System."

BACKGROUND

The invention relates to a method and system for achieving high bit densities in a direct-sequence spread spectrum communication system by using encoded spreading codes.

Claim 1 is reproduced below.

1. A method comprising:

creating a first encoded pseudo-noise code, wherein the first encoded pseudo-noise code corresponds to a value of a signal to be transmitted; and

spreading a first signal by modulating the first signal with the first encoded pseudo-noise code.

The examiner relies on the following reference:

Rosen 4,972,480 November 20, 1990

Claims 1, 2, 8, 11-15, 21, and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rosen.

Claims 3, 5, 6, 9, 10, 16, 19, 20, 23, and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen.

We refer to the final rejection (Paper No. 11) (pages referred to as "FR__") and the examiner's answer (Paper No. 18) (pages referred to as "EA__") for a statement of the examiner's rejection, and to the brief (Paper No. 17) (pages referred to as "Br__") for a statement of appellant's arguments thereagainst.

OPINION

New ground of rejection under 37 CFR § 1.196(b)

Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite and/or misdescriptive. In claim 1, it appears inaccurate to say "modulating the first signal with the first encoded pseudo-noise code" (emphasis added) because the bits of the first signal are not directly "modulated" with the first encoded pseudo-noise code, in the sense of the prior art of Fig. 2a; instead the signal is directly "encoded" into the first encoded pseudo-noise code containing the value of the signal and then this value is transmitted. We are not aware of the term "modulating" being used in the art in the sense of encoding. The same problem exists with the term "modulating" in claims 11 and 12. Also, it seems inaccurate to say that the signal is "demodulated" in claims 6, 7, 13, and 14. Some explanation of how the terms "modulating" and "demodulating" are consistent with ordinary usage in the art is required.

Grouping of claims

Appellant groups the claims as follows:

Group 1: claims 1-10 stand or fall together;
Group 2: claims 11-20 stand or fall together;
Group 3: claims 21-24 stand or fall together.

Thus, claim 1 is taken as representative of Group 1, claim 11 is taken as representative of Group 2, and claim 21 is taken as representative of Group 3. However, since all the groups are

argued based on the same limitation appearing in slightly different wording, the claims will stand or fall together with representative claim 1.

Analysis

The examiner finds that the encoded pseudo-noise signal in Rosen is the modified part of the pseudo-noise signal, referring to column 1, lines 23-43, and Figs. 3 and 4 (FR3; EA3).

Appellant argues (Br8) that Rosen does not teach at least the limitation "creating a first encoded pseudo-noise code, wherein the first encoded pseudo-noise code corresponds to a value of a signal to be transmitted." Appellant refers to the example of Figs. 2b and 3 where the pseudo-noise code is determined by inverting a bit in the pseudo-noise code in a position corresponding to the signal to be sent and where different pseudo-noise codes are used depending on the particular value of the information to be sent (Br9-10). It is argued that column 1, lines 23-43, of Rosen does not teach that the pseudo-noise code is determined in any way on the logical value of the information to be sent (Br10).

The examiner responds (EA5):

> Appellant argues that Rose [sic, Rosen] failed to show "creating a first encoded P.N. code, wherein the first encoded P.N. code ***corresponds*** to a value of a signal information to be transmitted". However, [the] examiner disagree[s] with appellant because Rose [sic, Rosen] does show ***a P.N. code*** which ***corresponds*** to the value of the

> information to be transmitted. He creates a P.N. code that ***corresponds to*** (for example it could be ***a data or word or symbol***) that is going to be transmitted.

The examiner's position could be more clearly stated to explain how Rosen discloses creating a pseudo-noise code which corresponds to the value of the information to be transmitted, but we nevertheless agree with the finding of anticipation. The examiner relies on only the small portion of Rosen at column 1, lines 23-43. Rosen states (col. 1, lines 29-38): "The pseudo-noise (signals that appear to have noise-like properties) is combined with the data signal, typically by an 'exclusive or' operation. . . . The transmitted signal (combination of pseudo-noise and data signal) must appear to be noise to others monitoring the communications." The combination of the pseudo-noise and the data signal is broadly a "first encoded pseudo-noise code, wherein the first encoded pseudo-noise code corresponds to a value of a signal to be transmitted" because the data signal is combined into the pseudo-noise signal. That is, the term "corresponds" does not say how the encoded pseudo-noise code and the value of a signal are related and, thus, does not distinguish over the combined pseudo-noise and data signal in Rosen. It is noted that the description of the prior art in appellant's Fig. 2a also meets claim 1 where the pseudo-noise code 01011010 "corresponds to a value of a signal to be transmitted" where the value is 1, and the pseudo-noise code

10100101 "corresponds to a value of a signal to be transmitted" where the value is 0. In fact, the prior art of Fig. 2a does not have the "modulating" terminology problem noted in the new ground of rejection. As the examiner notes (EA5), where the claims specifically recite how the encoded pseudo-noise signal corresponds to the value of the first signal, the claims have been objected to. The anticipation rejection of claims 1, 2, 8, 11-15, 21, and 22 is sustained. The obviousness rejection of claims 3, 5, 6, 9, 10, 16, 19, 20, 23, and 24 stands or falls together with the anticipation rejection and is sustained.

CONCLUSION

The rejections of claims 1-3, 5, 6, 8-16, and 19-24 are sustained.

A new ground of rejection has been entered as to claims 1-20 pursuant to 37 CFR § 1.196(b).

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

> (b) Appellant may file a single request for rehearing within two months from the date of the original decision . . . .

37 CFR § 1.196(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
>
> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should appellant elect to prosecute further before the primary examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of

Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof. In this case, if there is any change to the claims in response to the new ground of rejection under 35 U.S.C. § 112, second paragraph, the examiner must consider how the amendments affect the merits; in effect this is a new appeal. If appellant is able to persuade the examiner that the terms "modulating" and "demodulating" are not misdescriptive, the case should be returned to the Board for affirmance of the prior art rejections.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED - 37 CFR § 1.196(b)

JERRY SMITH)
Administrative Patent Judge)
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LEE E. BARRETT) BOARD OF PATENT
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